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HERZBERG'S TWO-FACTOR THEORY OF
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PROGRAM MANAGEMENT COURSE INDIVIDUAL STUDY PROGRAM

HERZBERG'S TWO-FACTOR THEORY
OF

JOB SATISFACTION

STUDY PROJECT REPORT
RMD 76-1

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FORT BELVOIR, VIRGINIA 22060

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STUDY TITLE:**HERZBERG'S TWO-FACTOR THEORY OF JOB SATISFACTION****STUDY PROJECT GOALS:**

- To examine the research and subsequent development of the Herzberg Two-Factor Theory of job satisfaction.
- Review results from some actual test experience.
- Explore and highlight some known weaknesses which should be taken into account if adopting such a job satisfaction program.

STUDY REPORT ABSTRACT

This report presents a summary of the Herzberg Two-Factor Theory of job satisfaction. The purpose of the study is to develop the Herzberg theory and its possible application to an organization as a means of increasing worker productivity.

The study was conducted by means of a systematic research of a representative sample of the literature available on Herzberg's Two-Factor Theory. The Two-Factor Theory is one of the best known and most widely accepted job enrichment approaches today, however, it has caused considerable controversy among behaviorists. Both sides of the controversy are addressed.

In conclusion, the review shows that the controversy is well founded. The theory has some weaknesses which have not been adequately resolved. The publicity afforded Herzberg and his theory have caused it to be overstated.

The implications of this study are that job enrichment is a viable method for increasing worker productivity. Other job enrichment approaches should be evaluated along with Herzberg's before any action is taken. A properly planned and executed job enrichment program can have long-range benefits for an organization.

MANAGEMENT**CONCEPTS****MOTIVATION
JOB ANALYSIS****HUMAN FACTORS****MANAGEMENT SYSTEMS**

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Study Project Report
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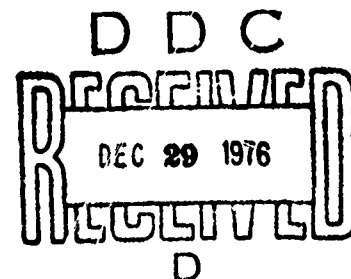
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May 1976

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This study project report represents the views, conclusions and recommendations of the author and does not necessarily reflect the official opinion of the Defense Systems Management School or the Department of Defense.

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EXECUTIVE SUMMARY

This report presents a summary of the Herzberg Two-Factor Theory of job satisfaction. The purpose of this study is to examine the theory as one which concentrates on increasing worker productivity through job enrichment.

The study is important because today's environment has placed increasing pressure on organizations both in government and industry to accomplish more with less. Meeting this challenge through higher productivity is possible if the individual workers can be properly motivated. Herzberg's two-factor theory is probably the most widely known and accepted approach relating directly to job satisfaction. Herzberg addresses the problem of job satisfaction in terms of those factors which cause satisfaction (motivators) and those which cause dissatisfaction (hygienes). This information then becomes the basis for evaluating an individual's job and making the changes necessary to increase worker motivation.

The Herzberg approach to job enrichment is only a theory and is not without its critics. The basic development of the theory is presented along with some of the evidences used to test the theory. Weaknesses levied against the theory by its critics are also considered.

In conclusion, a properly implemented job enrichment program can produce far reaching benefits for an organization. Herzberg's approach can and has been successfully implemented, but it has also suffered some dismal failures. Herzberg's Two-Factor Theory is generally felt to be overstated. As a result, it is recommended that other approaches to job enrichment be investigated along with Herzberg's approach before implementing any job enrichment program.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	ii
<u>Section</u>	
I. INTRODUCTION	1
II. HERZBERG TWO-FACTOR THEORY - DEVELOPMENT	5
III. HERZBERG TWO-FACTOR THEORY - EVIDENCES BOTH STUDIES AND ACTUAL IMPLEMENTATION	13
Studies	13
Actual Implementation	17
IV. HERZBERG TWO-FACTOR THEORY - WEAKNESSES AND POTENTIAL PITFALLS TO IMPLEMENTATION	25
Weaknesses	25
Potential Pitfalls to Implementation	29
V. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	33
Summary	33
Conclusions	34
Recommendations	35
SELECTED BIBLIOGRAPHY	37

SECTION I

INTRODUCTION

Today's economic environment has placed increasing pressure on government and industry alike to accomplish more within existing or even reduced resources. The Department of Defense has found this to be particularly true in recent years as annual budgets continue to be pared, even in the face of double-digit inflation. The pressure to accomplish more with essentially the same or even less represents a significant challenge to management - one which must be faced head-on. It is recognized that there are a number of methods or strategies available to management which could be employed to meet this challenge. The purpose of this report is to consider a strategy which has gained considerable attention in recent years - one that concentrates on increasing worker productivity through job enrichment.

Behavioral scientists have grappled with the issue of job enrichment for years. A significant amount of study and research has been conducted in this area and numerous books and articles have been written extolling the virtues of job enrichment. In one of his articles on the subject, Dr. Frederick Herzberg makes the following statement:

The term "job enrichment" is firmly lodged in the vocabulary of managers, behavioral scientists, and journalists. Managers are beginning to accept the basic theory behind job enrichment, but only at a cocktail-party level of understanding of human behavior. Behavioral scientists, ever ready to jump on a bandwagon, often have an equally shallow understanding, but a better vocabulary. And journalists have a new movement to misinterpret.

The result has been that job enrichment now represents many approaches intended to increase human satisfaction and performance at work, and the differences between all the approaches are no longer clear. The confusion, misuse, and subsequent bandwagon effect of job enrichment have led some companies, managers, and workers to conclude that they are merely caught up in a new word game. But job enrichment is a reality, and it is necessary because it will improve jobs and organizations. (6:70).¹

Herzberg then goes on to note that today we have several strategies which are aimed at improving the design of work in our organizations. Each of these strategies has emerged from a different theoretical or philosophical base and, as a result, leads to different actions with different goals. And, unfortunately, all are subject to distortion and misuse.

Herzberg has been called the "father of job enrichment." (5:44). Of the several strategies relating directly to job satisfaction, Herzberg's "orthodox job enrichment" and the two-factor theory of job satisfaction upon which it is based have received the greatest amount of attention in recent years and have generated the greatest amount of controversy. (11:303). Perhaps part of the reason for the controversy lies in the fact that the two-factor theory is still only a theory yet to be proven. Herzberg as well as numerous other behavioral scientists have conducted extensive investigations of the two-factor theory in attempts to either prove or disprove it. While there has been notable acceptance of the

¹ This notation will be used throughout the report for sources of quotations and major references. The first number is the source listed in the bibliography. The second number is the page in the reference.

theory, there are those who take exception to it and disagree on just what the results of the various investigations really mean.

Since job enrichment in general has taken on new emphasis in recent years and one of the more widely accepted approaches, albeit controversial, is Herzberg's two-factor theory of job satisfaction, this report is directed to a limited investigation of that theory. The investigation is a review of some of the literature contributed by individuals who themselves have conducted research on Herzberg's theory. The number of articles and books written to date on various aspects of the Herzberg two-factor theory was found to be much too great to really conduct a comprehensive review and assessment within the time available. What is felt to be a representative sample of the literature was reviewed and the results of that review are presented in this report. The review was limited almost exclusively to Herzberg's theory and no attempt was made to contrast it with any of the several other theories of job satisfaction. The goals or objectives of the report will be addressed and organized as follows:

A. Section II will provide the reader with a basic knowledge of the Herzberg two-factor theory. It will include what the theory is, along with generally how the theory was developed. A basic familiarity with the theory is felt to be necessary in order for the subsequent discussion to be totally meaningful.

B. Section III will consider the results of instances where Herzberg's theory has actually been implemented in an organization. In addition results of some of the research which has been accomplished in this field since the original Herzberg study will be considered.

C. Section IV will be addressing some of the negative aspects of the two-factor theory. As with almost anything else, claims and realities are frequently quite diverse. Herzberg's theory of job enrichment is no exception. One would be rather naive to consider the Herzberg approach a panacea - it is not. There are some weaknesses and potential pitfalls that one should be cognizant of, especially if planning to implement the theory in an organization.

D. Section V will consist of conclusions and recommendations relative to the Herzberg two-factor theory of job satisfaction.

SECTION II

HERZBERG TWO-FACTOR THEORY - DEVELOPMENT

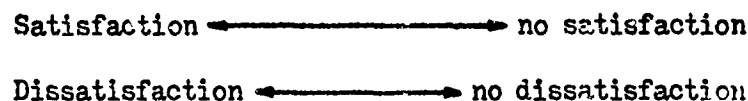
Herzberg's two-factor theory of job-satisfaction is not new, as a matter of fact, it dates back to 1959 and is the outgrowth of a research study project on job attitudes conducted by Herzberg, Mausner and Snyderman. Before considering the actual research conducted by Herzberg and his colleagues some of the basis for the "two" in the two-factor theory will be discussed. In his book, Work and the Nature of Man, Herzberg expounds the concept that man has two sets of needs: his need as an animal to avoid pain, and his need as a human to grow psychologically. (7:64-91). The biblical personages of Adam and Abraham are used to illustrate and develop the duality of man's nature. Briefly, as Adam, man is pictured as an animal whose overriding goal is to avoid the pain inevitable in relating to his environment. On the other hand, looking at man in his totality, in addition to his avoidance nature there exists a human being who is impelled to determine, to discover, to achieve, to actualize, to progress and to add to his existence. These needs summarize the Abraham concept of man. (7:187). A basic understanding of the concept that man exists as a duality and has two sets of needs present at the same time is germane to the further development of the two-factor theory. Another interesting and important aspect of man's dual nature follows in that the two sets of needs of man are essentially independent of one another. That is, each of the two concepts of man consist of a system of needs that operate in opposing directions. Furthermore, meeting the needs of one facet of man (Adam) has

little or no effect upon the needs of the other facet in man (Abraham). It should be noted that since both sets of needs exist in man at the same time both must be served and one will not substitute for the other. To illustrate, one cannot find happiness simply by avoiding physical pain, nor can one avoid pain by finding happiness. From this illustration it becomes apparent that happiness and pain are not polar opposites of the same feeling originating at the same source, that is, happiness and pain are not on the same continuum. This is the principal upon which the Herzberg two-factor theory is based.

The research study project conducted by Herzberg and his colleagues in 1959 was designed specifically to test the concept that man has the two sets of needs just discussed. (7:91). The study began with the investigators individually interviewing 200 accountants and engineers from nine different companies in the Pittsburgh area. The respondents were first requested to recall a time when they had felt exceptionally good about their jobs. The investigators sought by further questioning to determine the reasons for their feelings of satisfaction, and whether their feelings of satisfaction had affected their performance, their personal relationships and their well-being. Finally, a special sequence of events was used that served to return the worker's attitudes to "normal." A second set of interviews was then conducted in which the same respondents were asked to recall and describe incidents in which their feelings about their jobs were exceptionally negative - cases in which their negative feelings were related to some event on the job.

Analyses of the responses led Herzberg and his colleagues to conclude

that job satisfaction consisted of two separate independent dimensions: the first dimension was related to job satisfaction and the second dimension to job dissatisfaction. As separate independent dimensions, job satisfaction and job dissatisfaction are two dimensions that are not on opposite ends of the same continuum. Job satisfaction and job dissatisfaction represent two separate and distinct continua just as observed earlier with respect to happiness and pain. Further analyses of the results of the research indicated that the opposite of satisfaction on the job is not dissatisfaction, as one might be inclined to conclude, but rather "no satisfaction." Conversely, the opposite of dissatisfaction is "no" dissatisfaction rather than satisfaction. The concept of two separate independent dimensions is illustrated below:



The illustration shows the independence of the two continua and bears out the fact that simply because something doesn't cause dissatisfaction doesn't mean that it causes satisfaction. (14:20). The fact that job satisfaction is made up of two unipolar traits is not unique, but it does represent a difficult concept to grasp.

Herzberg offers another analogy as follows to help explain this way of thinking about job attitudes:

Let us characterize job satisfaction as vision and job dissatisfaction as hearing. It is readily seen that we are talking about two separate dimensions, since the stimulus for vision is light, and increasing and decreasing light will have no effect

on man's hearing. The stimulus for audition is sound, and, in a similar fashion, increasing or decreasing loudness will have no effect on vision. (7:96).

Pursuing the subject of job satisfaction and job dissatisfaction brings up the related subject of just what kind of factors were found from the study to bring about job satisfaction or job dissatisfaction. Factors which bring about job satisfaction are commonly called satisfiers or motivators and were found from the study to be related to the nature of the work itself and the rewards that result from the performance of that work. The most significant of these involve characteristics that promote an individual's needs for self-actualization and self-realization in his work, (Recall the Abraham concept of man). These factors are essentially linked to job content, which means they are intrinsic to the job itself. Herzberg analyzed and classified the job content factors or satisfying experiences as follows:

Satisfiers

- Achievement
- Recognition
- Work itself
- Responsibility
- Advancement
- Growth

According to Herzberg, these factors stand out as strong determiners of job satisfaction with three of them, a sense of performing interesting and important work (work itself), job responsibility and advancement being the most important relative to a lasting attitude change. Achievement, more so than recognition, was frequently associated with such long-range factors as responsibility and the nature of the work itself. Recognition

which produces good feelings about the job does not necessarily have to come from superiors; it may come from subordinates, peers, or customers. It is interesting to note that recognition based on achievement provides a more intense satisfaction than does recognition used solely as a human-relations tool divorced from any accomplishment. The latter does not serve as a satisfier. (7:92-93; 9:370).

Compared with the satisfiers or motivators are the factors which cause low job attitude situations or job dissatisfaction. Such factors were found from the analysis of the study results to be associated primarily with an individual's relationship to the context or environment in which he does his work. These factors are extrinsic to the work itself and are referred to as dissatisfiers or hygiene (or maintenance) factors. Herzberg categorized the context or environmental factors causing dissatisfaction to include:

Dissatisfiers

- Company policy and administration
- Supervision
- Working conditions
- Interpersonal relations (with peers, subordinates and superiors)
- Status
- Job security
- Salary
- Personal Life

Details on the methods used by Herzberg and his colleagues to reduce and analyse their research data will not be discussed in this paper. The satisfiers and dissatisfiers that have been listed are referred to as first-level factors. (7:115). There are 16 total first-level factors of which six are motivators and ten are hygiene or maintenance factors (Inter-

personal relations with peers, subordinates and superiors count as three in Herzberg's analysis). It should be pointed out that during the analysis of the respondents answers that all did not fall neatly into the two categories of "satisfiers" or "dissatisfiers." There was some overlap where a "satisfier" would actually extend into the "dissatisfier" category in some instances. All this means is that a factor which caused satisfaction in the majority of the cases was the source of dissatisfaction for some. The preponderance of data, however, does statistically differentiate between the two factors "satisfier" and "dissatisfier."

The discussion to this point has basically dealt with the development of the two-factor theory frequently referred to as the motivation-hygiene theory. There are a couple of underlying questions which may have come up during the foregoing discussion that have not been specifically addressed. Why, for instance, do hygiene factors serve as dissatisfiers? Why, on the other hand, do motivators affect motivation in the positive direction? Consider the answers to these questions in terms of the distinction between the two sets of human needs (Adam vs Abraham). One stems from man's animal nature and his need to avoid pain. This set consists of the needs for which the hygiene factors are relevant. The word "hygiene" is a medical term meaning preventative and environmental. This is an appropriate term in view of the fact that the hygiene factors represent the environment to which man as animal is constantly trying to adjust. The dissatisfiers or hygiene factors previously listed are the major environment aspects of work. Because these factors serve only to reduce pain, they cannot contribute to positive satisfaction but only to the avoidance of

dissatisfaction. Herzberg found, for example, that good working conditions (Physical environment, congenial co-workers, good supervision) were rarely named as factors contributing to job satisfaction; however, poor working conditions were frequently cited as sources of dissatisfaction. (14:23).

The second set of human needs relates to the human drive toward self-realization. To help illustrate the affect of motivators on motivation Herzberg offers an analogy drawn from a familiar example of psychological growth in children.

When a child learns to ride a bicycle, he is becoming more competent, increasing the repertory of his behavior, expanding his skills - psychologically growing. In the process of the child's learning to master a bicycle, the parents can love him with all the zeal and compassion of the most devoted mother and father. They can safeguard the child from injury by providing the safest and most hygienic area in which to practice; they can offer all kinds of incentives and rewards, and they can provide the most expert instructions. But the child will never, never learn to ride the bicycle - unless he is given a bicycle! The hygiene factors are not a valid contributor to psychological growth. The substance of a task is required to achieve growth goals. Similarly, you cannot love an engineer into creativity, although by this approach you can avoid his dissatisfactions with the way you treat him. Creativity will require a potentially creative task to do. (7:95).

The above analogy serves to illustrate an important aspect of the motivator-hygiene theory. Self-realization can be achieved only through the fulfillment of factors which are intrinsic to the work itself, that is, the motivator factors. Such factors cannot satisfy the avoidance needs, just as the hygiene factors cannot fulfill the need for self-fulfillment.

In this section the development of Dr. Herzberg's Two-Factor Theory of job satisfaction has been discussed. The basis of his theory can be summarized in his observation that the opposite of job satisfaction is not job dissatisfaction but rather "no" job satisfaction, and similarly, the opposite of job dissatisfaction is not job satisfaction but "no" job dissatisfaction. Further, he concludes that the conditions which lead to job dissatisfaction involve the environment in which the job is accomplished. He calls these dissatisfiers "hygiene" factors. The conditions leading to job satisfaction involve the job itself. He calls these satisfiers "motivators." The motivators are achievement, recognition, work itself, responsibility, advancement and growth. The hygiene factors include company policy and administration, supervision, working conditions, interpersonal relations, status, job security, salary and personal life.

SECTION III

HERZBERG TWO-FACTOR THEORY - EVIDENCES

BOTH STUDIES AND ACTUAL IMPLEMENTATION

Studies

Since the original study on job attitudes conducted by Herzberg and his colleagues was published in 1959 (8), the study as well as the associated motivation - hygiene theory has received wide acceptance on one hand, but some justified criticism on the other. Herzberg acknowledges the criticism and considers one of the most pertinent of the criticisms to be the overgeneralization of the theory due to the fact the evidence was based on a rather limited sample of accountants and engineers. Another related and valid criticism has been levied against the very nature of psychological investigations in general. The unreliability of many of the findings of psychological research cause it to be more suspect than research in the hard sciences. This unreliability is due to a large extent to the number of variables involved and also to the possible intrusion of biases on the part of the investigator. (7:112). The upstart of these criticisms has been further on-the-job research conducted to gather additional data to test the theory. Herzberg's theory presents a rather simple hypothesis to test, therefore, it is not surprising that it has stimulated a considerable amount of research.

Herzberg himself presents some rather convincing data on further research on the verification of the motivation - hygiene theory. (7:112-186). One might well expect that the data Herzberg presents in his own book would

pretty much substantiate his theory, and it does. A summary of the results of some of the additional research which Herzberg refers to is presented here and will serve as a basis for the further discussion. Herzberg gives a rather thorough account of 10 tests which were run to validate the motivation - hygiene theory. Of the 10 tests conducted only two were conducted by Herzberg himself and the remaining eight by other individuals. The 10 tests consisted of 17 different populations involving 1,220 people. These studies included agricultural administrators, professional women, hospital maintenance personnel, nurses, manufacturing supervisors, food handlers, scientists, engineers, technicians and managers about to retire. The results of the studies indicate that out of the 51 significant differences reported for the six motivator factors, every one was in the predicted direction. For the 57 significant hygiene factors, 54 were in the predicted direction. This basically says that the predictions from the theory were wrong in less than 3 per cent of the cases. (7:143-144). These results were reported back in 1966. Needless to say, the controversy over the motivation - hygiene theory did not end with Herzberg's assessment of that relatively small amount of additional data.

Since Herzberg's original study there have been numerous studies conducted specifically to test his theory. While many of the studies firmly support Herzberg's observations, there appears to be a growing number conducted by other psychologists which counterindicate the satisfier - dissatisfier theory about job factors. One analysis of evidence leading to conclusions different from Herzberg is presented by House and Wiegand. (1967). They make the following conclusions:

Our secondary analysis of the data presented by Herzberg, (1966) in his most recent book, yields conclusions contradictory to the proposition of the Two-Factor theory that satisfiers and dissatisfiers are unidimensional and independent. Although many of the intrinsic aspects of jobs are shown to be more frequently identified by respondents as satisfiers, achievement and recognition are also shown to be very frequently identified as dissatisfiers. In fact, achievement and recognition are more frequently identified as dissatisfiers than working conditions and relations with the superior.

Since the data do not support the satisfier-dissatisfier dichotomy, the second proposition of the Two-Factor theory, that satisfiers have more motivational force than dissatisfiers, appears highly suspect. This is true for two reasons. First, any attempt to separate the two requires an arbitrary definition of the classifications satisfier and dissatisfier. Second, unless such an arbitrary separation is employed, the proposition is untestable. (9:385-386).

These conclusions are very interesting in that they were made following an analysis of the results of the same 10 tests Herzberg used in support of his theory.

Included in the article by House and Wigdor is the description and summary of the results of 30 empirical studies based on various research methods which have been reported in the literature. All of the investigations were directly concerned with Herzberg's two-factor theory and involved over 14,000 persons. An analysis of the results of these studies led House and Wigdor to the following four conclusions:

1. A given factor can cause job satisfaction for one person and job dissatisfaction for another person, and visa versa.
2. A given factor can cause job satisfaction and job dissatisfaction in the same sample.
3. Intrinsic job factors are more important to both satisfying and dissatisfying job events.

4. That the Two-Factor theory is an oversimplification of the relationships between motivation and satisfaction, and the sources of job satisfaction and dissatisfaction. (9:386-387).

Campbell, Dunnette, Lawler and Weick, in their book, point out that in addition to House and Wigdor, who reviewed available studies concerned with Herzberg's theory, there were a number of others who did likewise. They note, though, that the same conclusions are not drawn from reading the same literature. They attribute whether or not the data lends support to the theory to a large extent on the type of methodology used by the investigator. There have also been questions raised as to whether or not some investigators actually based their research on legitimate predictions from the theory. Campbell, Dunnette, Lawler and Weick conclude that if the empirical studies are examined in total, the negative evidence would appear to be more predominate primarily because it has been generated from a wider variety of approaches. (1:380-381).

Whitsett and Winslow (1967), on the other hand, take exception to the negative evidence and point out what they consider to be fundamental flaws. Their major reason for disregarding most of the negative evidence can be summed up in three basic errors they feel are prevalent:

1. Misinterpretation of the motivation - hygiene theory.
2. Methodological weaknesses.
3. Misinterpretation of results. (15:395).

Whitsett and Winslow conclude from their analysis that due to the errors mentioned above there is little empirical evidence for doubting the validity of the theory. They suggest that the theory clearly retains its utility and viability. (15:411).

From the evidence presented in this section so far, one would be safe in saying that the controversy surrounding Herzberg's two-factor theory is still far from resolved. The fact that different conclusions are drawn from the same evidence in some cases appears to give credence to the possibility that the conclusions are based to some extent on the preconceived notions of the investigator. That is, the conclusions drawn by an investigator are felt to be a function of whether he basically agrees or disagrees with the Herzberg two-factor theory before he begins his investigation and analysis. Whitsett and Winslow obviously are in basic agreement with the theory and set about to discount any criticism of it, whereas, House and Wigdor clearly disagree with the basic tenets of Herzberg's theory. These are only two of many examples which could be cited.

Actual Implementation

The thrust of the discussion to this point has been centered primarily around the results and conclusions of some of the studies which have been conducted to test the Herzberg two-factor theory of job satisfaction. Studies are just that - generally a group of people are selected for the study, information on job attitudes are obtained either by personal interview or a questionnaire and then the results are analysed. The studies themselves don't really address implementation of the two-factor theory as a job enrichment strategy in an organization. As a result, most of the literature on the two-factor theory is limited to discussions of the various studies. Very little has actually been written on the results obtained from companies or organizations where a Herzberg - type job enrichment program has been implemented.

Some of the literature reviewed for this paper contain statements which, although general in nature, do indicate that job enrichment programs are enjoying successes. One such statement is made by Grote (1972), who begins an article with the following statement:

Job enrichment is a strategy for increasing motivation - its effectiveness being demonstrated by a growing number of successful projects which have produced significant increases in job satisfaction and productivity. For the organization or manager facing a motivation problem, the strategy of enriching jobs is proving to be an effective solution. (4:16).

It is recognized that a job enrichment program can be based on any one of a number of approaches, however, the above article does refer to the Herzberg approach.

As implied earlier, there does not appear to be an abundance of literature devoted to the subject of the actual results of job enrichment programs. Frank and Hackman (1975) provide a little more insight to the subject of job enrichment by stating the reports of success are multiplying. Along with the indication of job enrichment program successes they acknowledge there are reports of failures too, although they are very seldom published. (3:414). The statements may be general in nature, but there does seem to be ample evidence to conclude that the Herzberg job enrichment (i.e. orthodox job enrichment) program is being successfully implemented in many places.

One document which was made available for review for this study and is of particular relevance to the present subject is the Ogden Air Logistics Center Orthodox Job Enrichment Program Report. (1975) (12). This report does provide specific details on the implementation of a job enrichment

program which sets it apart from the other literature which was reviewed. The report is of added interest in that it deals with a program implemented within an organization of one of the military services. Since there is increasing pressure on the services to accomplish more with less, the Ogden Air Logistics Center (ALC) approach of implementing the Herzberg Orthodox Job Enrichment (OJE) program may well be a lead to implementing OJE in other service organizations. The experience and results obtained at Ogden should prove helpful to others in assessing whether or not such a management approach would be suitable in their organizations.

Ogden ALC decided in May 1973 to develop a motivational program in order to produce more with less. That decision led to the later decision to implement the OJE approach to motivation based upon Herzberg's motivation-hygiene theory. Once organized, the Ogden OJE program moved into a trial phase with representation from all major Ogden ALC organizations. An extensive formal training program (120 hours) began on 28 January 1974 for an initial cadre of 16 OJE key men under a training contract with Herzberg and Associates. The training included the dynamics of how the motivational factors and the hygiene factors interrelate and specific skills in organizing OJE projects and working with management. The initial training was not a stand alone in that Herzberg and Associates continued to coach the keymen on a part-time basis for an additional eight months.

In February 1974 the 16 keymen selected eleven pilot projects which involved over 359 direct labor workers to include mechanics, warehousemen, service people and a variety of desk jobs. Selection of a diversity of test projects was felt necessary in order to allow an evaluation of command wide

application. It would also provide insight as to whether OJE would solve production problems in a cost effective manner.

A typical project consisted of 30 direct workers and was established with three management groups. The management groups included an implementing group of four to eight first and second level supervisors who could assist in the implementation, a coordinating group of six to 12 middle managers to resolve problems from the implementing group and, in some cases, an executive group of one to four senior executives. The keymen were responsible for educating all supervisors, managers and staff personnel who had project related responsibilities.

The management groups developed proposed changes by first reviewing the current job structure with respect to work flow processes, procedures, regulation, directives, etc. The creative process used by the groups began with brainstorming ideas for job redesign in order to install motivators and ingredients of a good job into each position. This process is called "greenlighting." A second process called "redlighting" uses an eight factor decision tree for categorizing, evaluating, and determining the sequence of implementation for job changes. The changes made included motivation and hygiene related items along with technical improvements.

The Ogden report contains a brief description of each of the 11 pilot projects. The organizations selected for an OJE program project are identified by title and mission and a short background is provided. Changes made to the jobs as well as the costs and benefits for each project are also reported. All of the projects recorded improvement in the quality of work life.

Below is a list of how often the motivators (job satisfiers) were either

reinforced or initiated in the 11 pilot projects. There were 27 instances involving change in hygiene factors. These were predominately classified as facilitating hygiene which simply means hygiene factors that facilitate the doing of tasks. This is contrasted with consummatory hygiene which refers to what people get in return for doing tasks (salary, status, security).

<u>Motivator Satisfier</u>	<u>Times implemented or reinforced</u>
Achievement	32
Recognition	17
Work itself	22
Responsibility	58
Advancement	3
Growth	23

The report points out that the above summary represents the results experienced in the 11 pilot projects at Ogden and is not necessarily indicative of what would be experienced in another group of 11 at Ogden or anywhere else. Each job which is enriched stands by itself as an area for specific application of Orthodox Job Enrichment. (12:9).

Results from the Ogden OJE program included soft data (opinions, attitudes and feelings) which were encouraging in terms of reduced turnover, reduced sick leave and improved attitude. Also included were hard data (measurable with high confidence) which showed more units produced with a fewer number of manhours required. This in itself is fairly significant

since one of the original objectives was to implement a motivational program to produce more for less.

At the time of Ogden's OJE report (April 1975), their program was ALC wide with 29 projects in process. This involved 26 keymen, 1,007 direct workers, and 269 managers. In the first year of operation, the OJE program yielded significant results. Although the first year carried heavy start-up and training costs, the benefits realized on an annualized basis exceeded the costs by nearly \$200,000. They predict savings from new projects to rise sharply in future years with savings made in the past to continue into the future in most cases.

In addition to the benefits just mentioned, there are a number of lessons learned which were considered key to the continuing success of the program. Below are some of those items most frequently mentioned and considered most important by the keymen:

- Cannot apply a cookbook solution to motivation.
- First level supervisor must accept project ownership.
- Success depends upon management support "top down."
- OJE is possible within current regulations and organizations.
- The time management spends on the project is never lost or wasted. New ideas, understanding, and channels of communication are achieved regardless of the success of the project.
- Part-time keymen are not as effective as full-time keymen.
- Measurements are necessary not only to show the status of projects but to inform management of the system changes.
- Measurement should be determined prior to making OJE changes.
- Management support of the project is usually best at the top and bottom of the organization structure. Middle management is often lukewarm in support.

- High turnover of keymen in an organization causes severe disruption of on-going projects. Stability and consistency are necessary.
- Quantifiable results are not always obtainable in near term. First results may not be available for nine to 12 months. (12:15).

The Ogden ALC Orthodox Job Enrichment Program Report concludes that when properly applied, the motivation - hygiene theory leads to an improved management strategy which results in increased productivity and savings. By restructuring jobs so that they lead to more worker satisfaction and motivation, the managers are able to produce higher quality products more efficiently. (12:27).

It seems apparent from the Ogden ALC experience with Herzberg's OJE that they have had notable success in achieving their objectives to develop a motivational program. One should bear in mind that their report is only one experience with OJE and cannot be used to accurately predict probable results in another organization. One can, however, safely conclude from the Ogden report that OJE successes are possible, but only with full management support and extensive planning and training.

In this section some of the evidence available concerning the validity of Herzberg's two-factor theory has been presented. In the cases of study evidence, some were clearly in support of the theory while others were just as clearly critical of it. It can be added, that the arguments on neither side were totally convincing. Evidence from actual implementation of Herzberg's two-factor theory of job satisfaction was found to be rather limited in terms of specifics, but in general terms the literature claims multiplying successes. (3:414; 4:16). The Ogden ALC Report does provide considerable detail on the setup and results of the job enrichment program

program implemented there. At the time they reported their results their program was enjoying success. (12). Not all such programs succeed and although job enrichment failures are almost never published they are beginning to circulate among operating managers and organizational development professionals. (3:414).

SECTION IV

HERZBERG TWO-FACTOR THEORY - WEAKNESSES AND POTENTIAL PITFALLS TO IMPLEMENTATION

Weaknesses

In Section II the development of the Herzberg two-factor theory of job satisfaction was discussed. In Section III some of the evidence concerning Herzberg's theory was examined. Section IV will provide a more critical look at the two-factor theory. Some weaknesses in the theory itself along with some potential pitfalls in implementation will be presented.

It was noted in Section III that subsequent to Herzberg's original study there have been numerous studies conducted specifically to test the validity of the two-factor theory. Right from the start the theory sparked controversy among behaviorists and the subsequent studies have not brought supporters and critics any closer together.

King, (1970) in his paper, claims that the major portion of the controversy between supporters and critics of the theory stems from the lack of an explicit statement of the theory. (10:19). This could well explain why Whitsett and Winslow in their defense of the theory claim that critics have frequently misinterpreted the motivation - hygiene theory. (15:410). It follows that if the theory has not been explicitly stated it prompts different interpretations.

King lists five distinct versions of the two factor theory as stated or implied by various researchers. In order for the reader to gain a better understanding of the differences and also to note some of the subtleties

between the versions they are quoted below:

- Theory I - All motivators combined contribute more to job satisfaction than to job dissatisfaction, and all hygiene combined contribute more to dissatisfaction than to satisfaction.
- Theory II - All motivators combined contribute more to satisfaction than do all hygienes combined, and all hygienes combined contribute more to dissatisfaction than do all motivators combined.
- Theory III - Each motivator contributes more to satisfaction than to dissatisfaction, and each hygiene contributes more to dissatisfaction than to satisfaction.
- Theory IV - Theory III holds, and in addition, each principal motivator contributes more to satisfaction than does any hygiene, and each principal hygiene contributes more to dissatisfaction than does any motivator.
- Theory V - Only motivators determine satisfaction, and only hygienes determine dissatisfaction. (10:19).

The purpose of King's paper is to explicate and to evaluate these five versions of the theory. Since practically all relevant empirical investigations have been conducted using the critical incidents technique, King uses critical incident data as the basis for his discussions. (10:19).

The term "critical incidents" can be explained through application of the term to the original Herzberg, Mausner and Snyderman study which was covered in Section II. In that study accountants and engineers were interviewed and asked to describe specific instances (incidents) when they felt exceptionally good or exceptionally bad about their jobs. When these "critical incidents" were analysed it was found that good critical incidents

were dominated by reference to the intrinsic aspects of the job (satisfiers or motivators) and the bad critical incidents were dominated by reference to the extrinsic factors (dissatisfier or hygiene).

King's treatment of the five versions of the theory is rigorous and fairly comprehensive. His review of available studies indicated there was no relevant empirical data to support either Theory IV or Theory V. The majority of his article is given to the evaluation of Theories I, II, and III. The studies reviewed by King were one of three types. The first type were replications of the original Herzberg study, either interview or questionnaire. The second type were studies in which subjects coded the perceived determinants of their critical incidents. The third type were correlational studies. These types are mentioned because it appears that the method of study conducted definitely influences the results. King makes the following observation with respect to the study method used:

In both the Herzberg - type studies and the subject-coded studies, the determinants of satisfaction and dissatisfaction were measured by direct self-report. While the very nature of satisfaction and dissatisfaction may require that these constructs be measured by a self-report technique, it is neither necessary nor desirable that the determinants of satisfaction and dissatisfaction be measured by direct self-report. The use of these measures permits an explanation of the results solely in terms of defensive biases inherent in such measures.

In correlational studies, the extent to which job factors contribute toward satisfaction and dissatisfaction is not determined by self-report but is inferred from the correlations between job factors and measures of satisfaction with individual job factors and measures of overall satisfaction and dissatisfaction, (10:28).

King considered the different studies available, taking into account the basic study method used, and then compared the studies against Theories I, II, and III for relevance. His conclusions are quoted in part below:

1. Theory III, being supported by the Herzberg-type studies but not the subject-coded studies, merely reflects experimenter coding biases.
2. Theory I, although being supported by both the Herzberg-type studies and the subject-coded studies, has not been adequately tested in studies where the determinants of satisfaction were measured by techniques other than direct self-report. It is possible that Theory I merely reflects defensive biases inherent in such self-report measures.
3. Theory II has not been adequately tested in studies other than the Herzberg-type critical incidents studies. It is thus possible that Theory II merely reflects experimenter coding biases or defensive biases inherent in self-report measures.

The relationship between these conclusions and the principle of multiple operationalism should be noted. According to the principle of multiple operationalism, a hypothesis is validated only if it is supported by two or more different methods of testing, where each method contains specific idiosyncratic weaknesses, but where the entire collection of methods permits the elimination of all alternative hypotheses. The application of this principle to Theories I, II, and III indicates that none of these theories have been validated. (10:29).

One can conclude from King's paper that Herzberg's two-factor theory does indeed have some inherent weaknesses, not the least of which is the lack of an explicit statement of the basic theory by Herzberg. The subject of possible biases in the investigator and/or the respondent has also been raised as a potential weakness in the study method used to derive the Herzberg theory.

Ondrack (1974), in his article, addresses the facet of the controversy

concerning the recall methodology used by Herzberg and its possible susceptibility to bias from defensive processes within the respondent. (13:79). He conducted a test using an instrument adapted from the Occupational Values Scale. This instrument was a semi-structured scale which elicited projective responses and as a result considerably reduced the possibility of aroused ego-defensiveness. The responses from the instrument were classifiable using the familiar Herzberg job-factor categories. The results from the test were interesting in that they did not conform to the Herzberg two-factor pattern. Herzberg's six motivators in rank order are: Achievement, recognition, work itself, responsibility, advancement and growth. Results from the Ondrack study indicate that the six most important motivating factors are: work itself, salary, relations with peers, achievement, independence and responsibility. Two of this last list of factors are hygienes (salary, relations with peers), in the Herzberg model, and one (independence) is a new factor developed by the study. In terms of sources of dissatisfaction in the Herzberg model, the most prominent source is company policy and administration and this factor was barely mentioned by the respondents. (13:84-85).

There were some other lesser differences noted between Herzberg's model and Ondrack's study results, but the differences already cited seem to provide ample evidence to suspect that Herzberg's conclusions are somewhat weakened due to biases on the part of the respondent.

Potential Pitfalls to Implementation

Acknowledgement of weaknesses in Herzberg's theory does not preclude one from going ahead and implementing the Herzberg job enrichment program

in an organization. A basic awareness of the weaknesses might even prove to be an asset in that one could possibly compensate for them in an implemented program. Whether or not one considers weaknesses in the basic theory significant, there are still some possible pitfalls one should be aware of before implementing a job enrichment program.

The following discussion is an attempt to extract thought and ideas from the various literature reviewed to stimulate one's thinking before implementing a job enrichment program such as Herzberg's Orthodox Job Enrichment Program. The thoughts and ideas presented are necessarily somewhat subjective, but it is hoped they will help to avoid what appears to be potential pitfalls in any job enrichment program venture. The following thoughts and ideas are presented with no importance attached to the order:

- Job enrichment is a strategy for increasing motivation. The strategy of job enrichment involves changing the job. The specific process required to enrich a particular job involves more than mere acceptance of the theory. One must have a plan. (4:17).
- Your best source for job-design ideas is probably already on your payroll; he knows how things were done before behavioral science took over. (6:70).
- Although changes described within each project of the Ogden OJE program resulted in successful motivation, hygiene, and technical improvements with related gains in productivity, quality, and employee attitudes, OJE cannot be implemented using a "cook book" approach. One cannot apply changes made in one organization directly into another organization and assume improved productivity and motivation. Each organization - each job - must be evaluated to determine the most appropriate job changes. (12:7,8)
- Publicity regarding enrichment of jobs should be avoided at worker level. Fanfare and publicity at the worker level only create expectations of future improvement that may not be possible to achieve. (12:8)
- Some points from Ogden's lessons learned. (12:15).
 - Success depends upon management support "top down."

- Part-time keymen are not as effective as full-time keymen.
- High turnover of keymen in an organization causes severe disruption of on-going projects. Stability and consistency are necessary.
- Job enrichment is a continuing process. Growth potential must always be available. Reevaluation must be done periodically.
- Quantifiable results are not always obtainable in near term. First results may not be available for nine to 12 months.
- Training of key personnel must be of the highest quality in content or the program will tend to dilute and become ineffective. (12:27).
- Work value changes significantly as one moves up within the organizational structure. (2:37).
- Management can create motivational job satisfaction at all levels of an organization if it wants to and is willing to apply contemporary management methods. (2:37)
- Expect resistance or barriers at the worker-level, middle-management level and top level management. (5:44, 45).
- Anticipate setbacks and be prepared for continuous evaluation and revision of action-plans throughout project. (3:434).

The preceding ideas have been presented as representative of areas where an awareness and proper attention may help to avoid potential problems in implementing a job enrichment program. One can conclude from the list that an effective job enrichment program cannot be expected overnight, singlehandedly at no cost.

In the last two sections evidences testing the Herzberg theory plus some weaknesses and potential pitfalls have been presented. In reviewing these aspects, it is interesting to note that Dr. Herzberg has not really come forward to answer the critics. The arguments raised seem to be legitimate and warrant more than mere hand-waving. In the opinion of this

author, it is in order for Herzberg to objectively reevaluate his conclusions and explicitly state the theory. No evidence of this type of activity on the part of Herzberg was found in any of the literature reviewed. As a matter of fact, in one of Herzberg's fairly recent articles he admits there is a sad contrast between the promise of job enrichment and the reality, but he blames the disparity on social and organizational reasons and doesn't even hint at possible weaknesses in the theory. (5:44, 45).

Although not specifically addressed in any of the literature reviewed, it does appear that the publicity given to Herzberg and his theory may well be the reason for his seeming lack of responsiveness. Since the theory has been fairly widely accepted, Herzberg undoubtedly has profited financially from writing and consulting. If this indeed is true, it is apparent that there is really very little impetus for Herzberg to answer his critics or to revise or clarify his theory in any way. In conclusion, Herzberg's failure to respond to the critics tends to weaken his own position and strengthen that of the critics.

SECTION V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The Herzberg Two-Factor Theory of job satisfaction has been traced through its development and some of the subsequent controversy it has created. The two-factor theory is also called the dual-factor theory and the motivation - hygiene theory. Motivators have to do with factors intrinsic to the job and which lead to job satisfaction (achievement, recognition, work itself, responsibility, advancement and growth). Hygiene factors, on the other hand, are those factors extrinsic to the job and which lead to job dissatisfaction (company policies and administration, supervision, working conditions, interpersonnel relations with peers, subordinates and superiors, status, job security, salary and personal life). The basis of Dr. Herzberg's Theory is his observation that the opposite of job satisfaction is not job dissatisfaction but rather no job satisfaction, and similarly, the opposite of job dissatisfaction is not job satisfaction but no job dissatisfaction. The theory derives its name from the concept that job satisfaction and job dissatisfaction are distinct and separate continua. Factors affecting one continuum will have little or no effect on the other and visa versa.

The method and results of Herzberg's original study have been the center of considerable controversy among behaviorists. Many have conducted independent studies and evaluations of Herzberg's theory to test its validity. A review of the literature reveals that there are those who agree

with Herzberg's conclusions and those who do not. Results from actual implementation of Herzberg's two-factor theory in the form of the Orthodox Job Enrichment Program are not widely published. However, the information which has been published in this area indicates noteworthy successes.

Critics of the two-factor theory claim it contains weaknesses. The basic weaknesses claimed stem from the lack of a clear statement of what the theory really is as well as biases which appear to have been introduced into the original study. In spite of the fact that some of the criticisms levied against the theory are credible and well defended, Herzberg's theory has been used as the basis for reportedly successful job enrichment programs. A successful job enrichment program requires careful and thorough planning with a full awareness of potential pitfalls and weaknesses.

Conclusions

The increasing pressure to accomplish more within existing or even shrinking resources has created a new challenge for management. One means of meeting this challenge is to somehow increase worker productivity. It is concluded from the literature that this can and has been accomplished through job enrichment programs which increase worker motivation. One widely publicized and accepted approach to job enrichment is Herzberg's Orthodox Job Enrichment based upon his two-factor theory of job satisfaction.

The literature clearly indicates that Herzberg's two-factor theory of job satisfaction has been used as the basis of successful job enrichment programs, such as experienced at Ogden ALC. (12). The theory, as proposed, is not restrictive to any particular occupation or working level. Over the years it has received fairly wide publicity and as a result is the most

widely accepted job enrichment approach today. While the Herzberg approach is attractive in many ways and has been implemented in a number of different organizations with success, there are also reports of its failure. Herzberg approaches such failures rather academically and attempts to explain them away. He never really comes to grips with any of the major criticisms levied against the basic two-factor theory. It is the opinion of this author, from the overall review, that the Herzberg two-factor theory is generally overstated in its claim.

Due to the overall popularity of the Herzberg job enrichment approach, there exists more data and information on it than any of the other approaches. It is finally concluded that with the amount of information available on the two-factor theory a workable job enrichment program could be implemented by appropriately tailoring Herzberg's approach.

Recommendations

Increasing worker productivity through motivation represents a method which can have far reaching benefits for an organization. More attention should be given by management in both government and industry to the use of job enrichment as a means of increasing motivation. Actual implementation of an enrichment program should be done with top level management support and on a large organizational scale as opposed to an office or two.

Job enrichment approaches are a fairly volatile subject among organizational behaviorists today and as such should be undertaken with caution and as objectively as possible. In selecting an approach for possible implementation, management should resist any bandwagon appeal that sometimes accompanies an approach. This paper has addressed only the Herzberg job

enrichment approach which is generally recognized as the most widely accepted approach. Herzberg's approach may be the most popular, but that does not automatically make it best. Following the review of literature on the subject, it is the opinion of this author that the two-factor theory approach has been overstated. With this in mind, it is recommended that the Herzberg theory not be accepted blindly. Other approaches have been advanced which should be given serious consideration before making any final determination on implementing a job enrichment program.

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